Choose and complete ONE of the following problems: Graded out of 10 points; beyond that is extra credit. If you attempt multiple problems make it clear which one you want graded; failure to do so will result in only the lowest score being graded.

- 1) Given that $x^2 + y^2 = 1$, find $\frac{dy}{dx}$. (10 points)
- 2) Given that $x^3 + y^3 = 5x$, find $\frac{dy}{dx}$. (12 points)
- 3) Given that $x^4 + y^4 = xy^2$, find $\frac{dy}{dx}$. (14 points)